

IDM

MICRO ARCHITECT

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TABLE OF CONTENTS

| | |
|-------------------------------------|----|
| COVER | 1 |
| COPYRIGHT NOTICE | 2 |
| INTRODUCTION | 3 |
| IDM DATA BASE CONCEPTS | 4 |
| DIFFERENCE BETWEEN IDM-III & IDM-IV | 4 |
| TUTORIAL | 5 |
| FILE PARAMETER DEFINITIONS | 9 |
| REFERENCE | 10 |
| REPORT WRITER | 13 |
| PITFALLS | 15 |
| LIMITS | 15 |
| PROGRAM TUNING | 15 |
| SUMMARY | 16 |

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NOTE FROM DOS MANUAL - "GOOD DATA PROCESSING PROCEDURE DICTATES THAT THE USER TEST THE PROGRAM, RUN AND TEST SAMPLE SETS OF DATA, AND RUN THE SYSTEM IN PARALLEL WITH THE SYSTEM PREVIOUSLY IN USE FOR A PERIOD OF TIME ADEQUATE TO INSURE THAT RESULTS OF OPERATION OF THE COMPUTER OR PROGRAMS ARE SATISFACTORY."

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INTRODUCTION

IDM PROVIDES A GENERAL PURPOSE, INTERACTIVE, SIMPLE YET POWERFUL SOLUTION TO DATA BASE MANAGEMENT. EASE OF USE BY NON-TECHNICAL PERSONNEL HAS BEEN THE PRIMARY DESIGN CONSIDERATION. IDM ALLOWS MANY APPLICATIONS TO BE COMPUTERIZED WITHOUT ANY USER PROGRAMMING. THE BASIC COMPONENTS OF IDM ARE: DATA BASE INITIALIZATION, DATA BASE MANIPULATION, REPORT WRITER, AND REPORT GENERATOR. THE DATA INITIALIZATION SUB-SYSTEM LETS YOU SPECIFY THE FILE PARAMETERS ON-LINE, SUCH AS THE NAME, TYPE, SIZE OF A FIELD, THE NUMBER OF RECORDS, THE ACCESS METHOD, ETC. THE DATA MANIPULATION SUB-SYSTEM LETS YOU ADD, DISPLAY, PRINT, DELETE, OR UPDATE A RECORD. THE REPORT WRITER LETS YOU SPECIFY THE FORMAT OF A REPORT ON-LINE. THE USER SPECIFIES PAGE HEADING, SELECTS FIELDS AND FILTER CRITERIA. MULTIPLE SORT-KEYS CAN BE USED. FIELD CALCULATIONS INCLUDE TOTALS, AVERAGES, MULTIPLICATION, DIVISION, ETC. THE REPORT GENERATOR ENABLES THE USER TO PRODUCE STANDARD REPORTS OR REPORTS PREVIOUSLY SPECIFIED IN THE REPORT WRITER. UP TO 10 SUCH FORMATTED REPORTS CAN BE SPECIFIED BY THE USER ON-LINE AND SAVED ON DISK. YOU CAN RANDOMLY ACCESS A RECORD BY SPECIFYING A KEY OR A RECORD NUMBER. TECHNICAL FEATURES INCLUDE HASHING, BLOCKING AND BUFFERING TECHNIQUES TO PUT THE DISK SYSTEM INTO OPTIMAL USAGE.

IDM IS INTERACTIVE SO THERE ARE NO MORE COMMANDS AND SYNTAX TO BE REMEMBERED. IT IS ENJOYABLE TO USE AND IS COMPLETELY HUMAN ENGINEERED TO REDUCE FATIGUE OF THE USER. IDM IS ONE BIG PROGRAM SO YOU DO NOT HAVE TO SPEND ALL THE TIME IN LOADING PROGRAMS AS MOST OTHER DATA BASE SYSTEMS DO. IDM ATTEMPTS TO PROVIDE DATA BASE TOOLS RIGHT TO THE END-USERS.

THIS PACKAGE CAN COMPUTERIZE A LOT OF APPLICATIONS WITHOUT USER PROGRAMMING IN HOME AND BUSINESS. THE FOLLOWING LIST CONTAINS SOME EXAMPLES OF THE USES AND THE LIST CAN BE ENDLESS. EXAMPLES OF APPLICATIONS ARE MAILING LIST, CHECK RECORDING, STOCK INFORMATION, INVENTORY SYSTEM, ACCOUNTING, ETC. THE PROGRAM IS AIMED AT THE END-USER BY PROVIDING ON-LINE COMMANDS TO CREATE A DATA BASE INFORMATION SYSTEM WITH MINIMUM HARDWARE AND SYSTEM RESOURCES. THE PROGRAM CANNOT BE COMPARED TO THE DATA BASE SYSTEMS THAT HAVE UNLIMITED RESOURCES (MEMORY, DISK STORAGE, ETC) OR THE SYSTEMS THAT REQUIRE USER PROGRAMMING. WE DO RECOMMEND IT FOR ANY HOME APPLICATIONS, VERY SMALL BUSINESSES, AND SOME UNIQUE APPLICATIONS. DO NOT USE IT FOR A COMPLICATED INVENTORY SYSTEM OR ACCOUNTS RECEIVABLE SYSTEM. WE HAVE SPECIAL PACKAGES TO HANDLE THE MORE COMPLICATED BUSINESS APPLICATIONS. FOR MAILING LIST APPLICATIONS, IDM-IV HAS A BUILT-IN LABEL GENERATOR.

SINCE THERE IS NO USER PROGRAMMING IN MOST CASES, THE PROGRAM IS EASY TO MAINTAIN. THE OPERATOR HAS ONLY ONE RULE TO REMEMBER FOR SEVERAL APPLICATIONS INSTEAD OF EVERY DIFFERENT RULE FOR EACH APPLICATION.

IDM DATA BASE CONCEPTS

A FILE IS A GROUP OF RECORDS. A RECORD CONSISTS OF FIELDS. FOR EXAMPLE, THE MAILING LIST RECORD SHOULD HAVE A NAME FIELD, AND AN ADDRESS FIELD, ETC.

A SECTOR IS A DISK I/O UNIT AND IS 256 BYTES LONG. USING BLOCKING TECHNIQUES, WE CAN PUT SEVERAL RECORDS IN A SECTOR. FOR EXAMPLE, IF THE RECORD SIZE IS 40 BYTES LONG, WE CAN PACK 6 RECORDS INTO A SECTOR.

A RECORD CAN BE ACCESSED BY A RECORD NUMBER OR BY AN ALPHANUMERIC KEY. THE USER HAS TO DEFINE THE ACCESS METHOD DURING INITIALIZATION. A HASHING TECHNIQUE IS USED TO ACCESS A RECORD BY A KEY. IT CONVERTS THE KEY INTO A RANDOM NUMBER, MAKES SURE IT IS WITHIN THE FILE LIMIT AND USES IT AS A RECORD NUMBER TO ACCESS A RECORD.

TWO DATA TYPES ARE SUPPORTED: STRING AND NUMERIC. STRING CONSISTS OF ANY GROUP OF CHARACTERS. NUMERIC FIELD IS A FLOATING POINT DECIMAL NUMBER. IT CONTAINS THE NUMERAL DIGITS 0 THROUGH 9, PLUS AND MINUS SIGNS, AND THE DECIMAL POINT. ARITHMETIC FUNCTIONS CAN BE PERFORMED ON NUMERIC DATA. IN THIS VERSION, ONLY NUMERIC FIELDS CAN BE SELECTED FOR FILTER AND STRING FIELDS CAN BE SORTED WHEN SPECIFIED IN REPORT WRITER.

A DETAILED DESCRIPTION IN DATA BASES IS BEYOND THE SCOPE OF THIS MANUAL. MORE INFORMATION CAN BE OBTAINED IN TRS-80 DOS SYSTEM MANUAL.

DIFFERENCES BETWEEN IDM-III AND IDM-IV

SINCE THE TWO PROGRAMS ARE VERY SIMILAR, THEY ARE DESCRIBED ON THE SAME MANUAL. MOST OF THE FEATURES OF IDM-IV ARE THE RESULTS OF THE FEEDBACKS FROM IDM-III USERS. THERE ARE MANY COSMETIC CHANGES, AND A FEW FUNCTIONAL CHANGES. THEY INCLUDE AN IMPROVED SORTING ALGORITHM (SHELL SORT), AND THE ABILITY TO PRODUCE LABELS. MORE EXTENSIVE DATA CHECKS ARE PERFORMED. IDM-IV IS DELIVERED ON DISKETTE IN THREE PROGRAMS INSTEAD OF ONE PROGRAM ON CASSETTE. ONE MAJOR COSMETIC CHANGE IS THE USE OF A BLINKING CURSOR AND LETTERS FOR COMMAND NAMES INSTEAD OF NUMBERS.

THE FILE STRUCTURE HAS NO CHANGE, SO IDM-III USERS CAN UPGRADE THE PROGRAMS AND USE THE EXISTING DATA FILES. RETURN THE CASSETTE OR DISKETTE FOR UPGRADE AND SEND A CHECK FOR THE DIFFERENCE OF THE TWO PACKAGES, PLUS \$3 FOR HANDLING AND \$4 FOR DISKETTE.

THERE SHOULD NOT BE ANY UPGRADE FOR SOME TIME AND THE NEXT VERSION MAY BE IMPLEMENTED ON SYSTEM WITH MORE HARDWARE RESOURCES. WE HAVE NOT IMPLEMENTED MULTIPLE ACCESS KEYS OR ISAM DUE TO ITS DIFFICULTIES IN SYSTEM ERROR RECOVERY. REGULAR ISAM REQUIRES TIME-CONSUMING MAINTENANCE AND DATA RE-ORGANIZATION. OUR FILE STRUCTURE IS SOUND, EASY TO USE AND THE CLOSEST YOU CAN GET FOR ERROR RECOVERY. IN MOST CRASHES, YOU MAY LOSE THE LAST UPDATES INSTEAD OF THE WHOLE FILE.

THE MANUAL DESCRIBES IDM-III BUT WILL COMMENT ON THE DIFFERENCES FOR IDM-IV.

TUTORIAL

IDM-III IS ONE PROGRAM AND NORMALLY DELIVERED ON CASSETTE. FOR PRACTICAL USE, REFER TO 'PROGRAM TUNING SECTION' TO SPLIT THE PROGRAM INTO TWO. THE SECOND PROGRAM CAN SORT MORE RECORDS AND CAN BE USED ONLY FOR PRODUCING SORTED REPORTS. YOU HAVE TO COPY THE PROGRAM FROM CASSETTE TO DISK ONLY ONCE. IDM-IV HAS THREE SEPARATE PROGRAMS, 'INIT', 'IDM' AND 'REPORT'. IT IS DELIVERED ON DISKETTE. THE THREE PROGRAMS ARE INDEPENDENT.

A SUPPLEMENTARY SHEET MAY BE PROVIDED TO INFORM THE USER OF ANY RECENT UPDATES. IF THE PROGRAM IS DELIVERED ON DISKETTE, THIS SHEET MAY BE REPLACED BY A DISK FILE NAMED 'VERSION', WHICH CAN BE 'LIST' BY DOS COMMAND. MOST OF THE PROGRAM CHANGES HAS BEEN INCLUDED IF YOUR PROGRAM IS DELIVERED ON DISKETTE.

REFER TO DIFFERENT SECTION FOR DIFFERENT VERSIONS.

IDM-III

FOR THOSE PAID EXTRA FOR THE PROGRAM DELIVERED ON DISKETTE, REFER TO IDM-IV. THERE IS NO WAY TO MASS DUPLICATE DISKETTES. DISKETTES ARE EXPENSIVE TO REPLACE AND HARD TO HANDLE. WE DELIVER IDM IN CASSETTE MEDIUM. YOU ONLY NEED TO COPY IT ONTO THE DISK ONCE. INSERT A BLANK DISKETTE CONTAINING SYSTEM SOFTWARE ONLY. BRING UP DOS BASIC WITH 1 AS THE NUMBER OF FILES IF YOU ONLY HAVE 32 K MEMORY. THIS IS VERY IMPORTANT. IF YOU HAVE A 48K SYSTEM, JUST HIT ENTER FOR THE DEFAULT NUMBER OF FILES (3). IDM-III ONLY USES 1 FILE. INSERT THE CASSETTE FROM MICRO ARCHITECT AND MAKE SURE THE CASSETTE PLAYER IS 'READ' READY. LOAD IDM BY TYPING.

NEW

CMD"T" (TURN OFF THE REAL-TIME CLOCK)

CLOAD (LOAD PROGRAM FROM CASSETTE)

CMD"R" (TURN ON THE REAL-TIME CLOCK)

.15197 2V\$(Z1,F)=LEFT\$(2A\$,2(30+Z1,F)) (FIX A BUG!!!)

SAVE"IDM" (SAVE TO DISKETTE)

RUN

IF YOU CANNOT LOAD THE PROGRAM, TRY DIFFERENT VOLUMES AND TONES. CLEAN THE CASSETTE HEAD WITH CASSETTE CLEANER AND DEMAGNETIZER. MOST CASSETTES COME WITH DUPLICATE COPIES. REFER TO LABEL ON THE CASSETTE TO FIND OUT WHETHER IT IS ON THE SAME SIDE OR ON SIDE B. IF YOU STILL CANNOT LOAD IT, RETURN THE CASSETTE AND WE WILL REPLACE THE FIRST ONE FREE. THE LICENSE NUMBER ON THE LABEL IS YOUR REGISTER NUMBER FOR IDM-III, AND WE HAVE A RECORD OF IT FOR COPYRIGHTS AND FUTURE UPDATES. SKIP THE NEXT PARAGRAPHS ON IDM-IV.

IDM-IV

THIS SECTION HELPS YOU BECOME FAMILAR WITH THE PACKAGE. A MORE DETAILED DESCRIPTION OF THE COMMANDS CAN BE FOUND IN 'REFERENCE' SECTION. YOU SHOULD HAVE A FORMAL USER'S MANUAL AND A DISKETTE. A SUPPLEMENTARY SHEET MAY BE PROVIDED TO CLARIFY THE MANUAL, INCLUDING UPDATES, ETC. YOU SHOULD READ THIS FIRST IF IT IS PROVIDED. THIS SUPPLEMENTARY SHEET MAY BE REPLACED BY A DISK FILE NAMED 'VERSION'. THIS FILE MAY BE LISTED OR PRINTED BY DOS COMMANDS. A DISK-TO-DISK BACKUP IS RECOMMENDED. COVER THE 'WRITE-PROTECT' HOLE ON THE DISKETTE BEFORE INSERTING IT INTO THE DISK DRIVE. A DISK DRIVE IS ALWAYS POWERED UP BEFORE INSERTING A DISKETTE, AND NEVER POWERED DOWN UNTIL ALL DISKETTES ARE REMOVED. DISK

DRIVE IS ALWAYS POWERED UP BEFORE INSERTING A DISKETTE, AND NEVER POWERED DOWN UNTIL ALL DISKETTES ARE REMOVED. DISK DRIVES SHOULD BE PLACED ON THE RIGHT HAND SIDE OF THE SCREEN MONITOR FACING YOU. DISKETTES SHOULD BE HANDLED WITH CARE. DO NOT BEND THE DISKETTE OR EXPOSE IT TO MAGNETIC FIELD. A POWER SURGE REGULATOR AND NEWDOS HELP TO REDUCE SYSTEM CRASHES. FOLLOWING THE ABOVE INSTRUCTIONS, DISK CRASHES SHOULD BE REDUCED TO A MINIMUM.

USE DOS DIRECTORY (DIR) COMMAND TO SEE THE FILES ON DISK. YOU SHOULD HAVE THE FOLLOWING PROGRAMS: INIT, IDM, REPORT AND VERSION. THE FILE 'VERSION' IS USED TO GIVE A VERSION NUMBER. LIST IT OR PRINT IT TO DISPLAY RELEASE NOTES IF ANY.

BRING UP BASIC WITH ONE AS THE NUMBER OF FILES. FOR NEWDOS, TYPE 'BASIC 1'. FOR A 48K SYSTEM, YOU CAN JUST HIT ENTER FOR THE DEFAULT VALUE WHICH IS THREE. IT IS VERY, VERY IMPORTANT TO USE ONE AS THE NUMBER OF FILES FOR 32K SYSTEMS AND WILL SAVE YOU A LOT OF FRUSTRATION. THE DISK PROVIDED DOES NOT ALLOW TOO MUCH FREE STORAGE AFTER THE PROGRAMS. YOU MAY HAVE TO SPECIFY A SMALLER MAXIMUM RECORD OR REPLACE THE PROGRAM DISK WITH A DATA DISK. THE FOLLOWING HELPS YOU TO INITIALIZE A SMALL DATA FILE AND USE SOME OF THE COMMANDS TO GET YOU STARTED. TYPE THE FOLLOWING:

```
LOAD"INIT"          (LOAD PROGRAM 'INIT')  
RUN
```

IDM-III AND IDM-IV

YOU HAVE JUST RUN THE PROGRAM. FROM HERE ON, REFER TO REFERENCE SECTION FOR DETAILS. AGAIN NOTICE THE DIFFERENCES BETWEEN IDM-III AND IV. IDM-III HAS ALL THREE PROGRAMS IN ONE. FOR ILLUSTRATION, WE WOULD LIKE TO CREATE A MAILING LIST DATA FILE. ENTER THE FILE PARAMETERS AS ON SCREEN #1 AND #2 TO DEFINE A RECORD WITH 4 FIELDS: NAME, ADDRESS, CITY AND SELECTION CODE. NOTE THE FIRST THREE FIELDS ARE STRING AND SELECTION CODE IS NUMERIC.

HIT ENTER KEY TO DISPLAY THE TWO SUMMARIES. COMPARE AND UNDERSTAND SOME OF THEM. DETAILS WILL BE GIVEN IN REFERENCE SECTION. ENTER '1' TO INITIALIZE THE DISK. THE RECORD NUMBER BEING INITIALIZED WILL BE DISPLAYED ON THE SCREEN. ALL THE RECORDS WILL BE WRITTEN WITH INITIAL VALUES, SPACES FOR STRING FIELDS AND 0 FOR NUMERIC FIELDS. IT IS A TIME-CONSUMING BUT NECESSARY PROCESS. IN SOME APPLICATIONS YOU MAY WANT TO REUSE THE INITIALIZED DATA FILE, DO A DISK-TO-DISK BACKUP AFTER INITIALIZATION. NOW WE HAVE CREATED A DATA FILE. NOTE INITIALIZATION SHOULD ONLY BE DONE ONCE FOR EACH APPLICATION.

INITIALIZATION FOR ACCESS VIA RECORD NUMBER IS NOT ABSOLUTELY NECESSARY. WE INCLUDE HERE FOR EASE OF RECOVERY FROM SYSTEM ERRORS.

RUN THE MAIN PROGRAM AGAIN. ENTER '2' FOR NO INITIALIZATION THIS TIME. FOR IDM-IV, THE USER HAS TO LOAD AND RUN THE SECOND PROGRAM 'IDM'. THE SYSTEM WILL REQUEST THE FILE NAME FOR INPUT. DO NOT SELECT AUDIT LOG. THE LIST OF COMMANDS, THE "MENU", WILL BE DISPLAYED NEXT. ENTER ADD COMMAND. THE SYSTEM WILL REQUEST A RECORD NUMBER, HIT ENTER TO GET THE NEXT AVAILABLE RECORD NUMBER (SHOULD BE 1). ENTER FIELD INFORMATION AS REQUESTED FIELD BY FIELD AS ON SCREEN #3. HIT ENTER KEY TO CONTINUE TO ADD THE NEXT RECORD. YOU CAN ALSO MODIFY THE ENTERED RECORD. ADD SEVERAL RECORDS BEFORE YOU GO BACK TO COMMAND MODE BY ENTERING '-1'.

ENTER INQUIRY COMMAND. ENTER '1' FOR RECORD NUMBER. RECORD # 1 WILL BE DISPLAYED AS ON SCREEN #4. YOU CAN ENTER ONE OF THE SUB-COMMANDS. THE 'REPORT' COMMAND IS A SEPARATE PROGRAM FOR IDM-IV. THE IDM-IV USER HAS TO END THE SECTION, LOAD AND RUN THE 'REPORT' PROGRAM.

** INIT **

FILE NAME: DATA/DAT

* DEFINE FIELDS :

OF STRING FIELDS? 3

FIELD # 1 :

NAME: NAME

SIZE? 20

FIELD # 2 :

NAME: STREET

SIZE? 30

FIELD # 3 :

NAME: CITY/STATE/ZIP_

SCREEN #1 INITIALIZATION 1

NAME: STREET

SIZE? 30

FIELD # 3 :

NAME: CITY/STATE/ZIP

SIZE? 35

OF NUMERIC FIELDS? 1

FIELD # 4

NAME? SELECTION CODE

* DEFINE ACCESS METHOD:

1 - ACCESS BY REC #. 2 - BY KEY? 1

* MAX NO OF REC (PRIME # FOR KEY ACCESS)? 10_

SCREEN #2 INITIALIZATION 2

** ADD **

RECORD NUMBER? 1

NAME?

MICRO ARCHITECT

STREET?

96 DOTHAN ST.

CITY/STATE/ZIP?

ARLINGTON, MA 02174

SELECTION CODE

? 12

REC HAS BEEN ADDED.

HIT ENTER - CONTINUE ADD. '-1' COMMAND. '0' - MODIFY. ? _

SCREEN #3

ADD COMMAND

** INQUIRY **

REC #? 1

NAME: MICRO ARCHITECT

STREET: 96 DOTHAN ST.

CITY/STATE/ZIP: ARLINGTON, MA 02174

SELECTION CODE: 12

SUB-COMMANDS:

'HIT ENTER' - READ NEXT REC. 'REC #' - READ.

'-1' - COMMAND. '-2' - UPDATE. '-3' PRINT. '-9' - DELETE. ? _

SCREEN #4

INQUIRY COMMAND

IN COMMAND MODE, ENTER REPORT COMMAND. ENTER '0' FOR A FORMAT LISTING OF THE ENTIRE DATA BASE. AN ENTIRE SECTION IS DEVOTED TO THE COMPLICATED 'REPORT WRITER'.

ALWAYS USE END COMMAND TO TERMINATE THE SESSION. FORGETTING TO DO THIS MAY RESULT IN LOSING SOME INFORMATION, SUCH AS THE CREATED FORMAT RECORDS IN THIS SESSION, THE RECORD COUNTER AND THE LAST UPDATES.

IDM-IV SEPARATES THE THREE FUCTIONS (INITIALIZATION, DATA BASE MANAGER AND REPORT GENERATION) INTO THREE SEPARATE PROGRAMS. EVERY TIME YOU SWITCH FROM DATA BASE MANAGER TO REPORT GENERATOR, YOU HAVE TO END THE SESSION AND RUN THE 'REPORT' PROGRAM. THIS ALLOWS MORE STORAGE FOR PROGRAM AND DATA, A FORMAT RECORD HAS TO BE RETREIVED FROM THE DISK.

FILE PARAMETERS DEFINITIONS

IN INITIALIZATION, FILE PARAMETERS ARE DEFINED. THE BASIC PARAMETERS INCLUDE THE MAXIMUM NUMBER OF RECORDS, RANDOM ACCESS METHOD, FIELD DEFINITIONS, ETC.

ALL THE FIELD NAMES, TYPES AND SIZES SHOULD BE WRITTEN DOWN ON A PAPER. MAKE SURE THE RECORD SIZE IS LESS THAN 256. THERE SHOULD BE AT LEAST ONE STRING FIELD. IF YOU CHOOSE RANDOM ACCESS BY RECORD KEY, THE FIRST FIELD IS THE KEY. YOU CAN EITHER CHOOSE RANDOM ACCESS BY SPECIFYING A KEY OR A RECORD NUMBER. FOR SOME APPLICATIONS, IT IS NICE TO BE ABLE TO RETREIVE A RECORD BY SPECIFYING A KEY. THE DISADVANTAGES ARE: 1) SHOULD NOT USE OVER 80% OF THE ASSIGNED MAXIMUM NUMBER OF RECORD, THE HIGHER THE PACKING FACTOR, THE LONGER THE TIME TO RETRIEVE A RECORD, 2) EVEN IF YOU ONLY HAVE ONE RECORD IN YOUR FILE, IT STILL HAS TO READ THE WHOLE FILE TO PRODUCE A REPORT, 3) THE MAXIMUM RECORD NUMBER HAS TO BE A PRIME NUMBER FOR EFFICIENCY.

IF YOU HAVE MORE THAN 1 DRIVE, PUT THE PROGRAM IN DRIVE #0 AND THE DATA FILE IN DRIVE # 1 BY SPECIFYING THE DRIVE UNIT IN INITIALIZATION. TO ILLUSTRATE, WHEN ENTERING THE FILE NAME, ENTER 'DATA/DAT:1'. EVEN IF YOU ONLY HAVE ONE DRIVE, YOU STILL CAN MAKE FULL USE OF THE DISKETTE STORAGE BY USING SEPARATE DISKETTES FOR PROGRAM AND DATA FILE. YOU CAN LOAD THE PROGRAM FIRST, AND THEN REPLACE IT WITH A DATA FILE DISKETTE BEFORE YOU RUN THE PROGRAM.

REFERENCE

IDM-IV HAS THREE SEPARATE PROGRAMS FOR INITIALIZATION, DATA BASE MANAGER AND REPORT. EACH PROGRAM HAS TO BE LOADED AND RUN SEPARATELY. OUTPUT TO THE SCREEN IS TAKEN OUT FOR IDM-IV. FOR SOME UNKNOWN REASON, WE CANNOT PUT A FORMATTED DISK ON THE FIRST DRIVE. IF YOU HAVE MORE THAN ONE DRIVE, USE A FORMATTED DISKETTE (CREATED BY 'FORMAT' COMMAND UNDER DOS) FOR STORING DATA FILE. FOR ONE DRIVE SYSTEM, YOU SHOULD LOAD THE PROGRAM AND REPLACE IT WITH A DATA DISKETTE TO MAKE FULL USE OF THE DISK STORAGE. BE SURE TO BRING UP BASIC WITH '1' AS THE NUMBER OF FILES.

(1) INITIALIZATION.

FOR IDM-III, AFTER YOU HAVE TYPED 'RUN' YOU CAN ENTER '1' FOR INITIALIZATION OR '2' IF THE DATA FILE HAS ALREADY BEEN INITIALIZED. INITIALIZATION SHOULD ONLY BE DONE ONCE. EXAMPLES OF FILE NAMES ARE 'ACCT/DAT', 'MAIL /DAT :1'. NOTE THAT THE LATTER EXAMPLE SPECIFIED DATA FILE IN DRIVE #1.

FIRST, THE STRING FIELDS WILL BE SPECIFIED AND THEN THE NUMERIC FIELDS. THE NAME AND THE SIZE OF A FIELD WILL BE ASKED FOR INPUT. YOU CAN HAVE A MAXIMUM OF TEN STRING FIELDS AND TEN NUMERIC FIELDS. YOU CANNOT HAVE ELEVEN STRING FIELDS AND NINE NUMERIC FIELDS. THE SIZE OF A NUMERIC FIELD IS FIXED TO BE 4 BYTES LONG. A STRING FIELD CONSISTS OF ALPHANUMERIC CHARACTERS WHILE A NUMERIC FIELD IS A FLOATING DECIMAL NUMBER. IN REPORT, STRING FIELDS CAN BE SORTED WHILE NUMERIC FIELDS USED FOR RECORD FILTER CRITERIA AND CALCULATIONS. THERE SHOULD BE AT LEAST 1 STRING FIELD. FOR EXAMPLE, 'ADDRESS' IS THE NAME OF A STRING FIELD AND 'COST PRICE' IS THE NAME OF A NUMERIC FIELD. YOU HAVE A CHOICE OF ONE OF THE TWO RANDOM ACCESS METHODS. FOR KEY RANDOM ACCESS, THE FIRST FIELD IS THE KEY AND THE MAXIMUM NUMBER OF RECORDS HAS TO BE A PRIME NUMBER FOR EFFICIENCY. A PRIME NUMBER IS A NUMBER THAT IS DIVISIBLE ONLY BY ITSELF AND ONE, SUCH AS 11, 17, 19, ETC. NOTE THAT NINE IS NOT A PRIME NUMBER. THERE IS NO REMAINDER WHEN DIVIDED BY THREE.

TWO SUMMARIES WILL BE DISPLAYED. THE FIRST ONE SUMMARIZES THE FIELD DEFINITIONS. THE SECOND ONE DESCRIBES THE OTHER FILE PARAMETERS. A SECTOR IS A DISK I/O UNIT AND IS 256 BYTES LONG. WE HAVE ONE BYTE RESERVED SO THAT THE MAXIMUM RECORD SIZE IS 255. IT ELIMINATES THE POSSIBILITY OF USING A STRING OF 256 BYTES LONG, WHICH IS NOT ALLOWED IN 'BASIC'. THIS BYTE WILL BE USED FOR FUTURE ENHANCEMENTS.

CURRENT FORMAT RECORD HAS NO MEANING DURING INITIALIZATION. A FORMAT RECORD IS USED IN THIS VERSION TO DESCRIBE THE REPORT FORMAT. FUTURE ENHANCEMENT MAY INCLUDE THE SCREEN FORMAT. UP TO TEN FORMAT RECORDS CAN BE SAVED ON DISK. "MAX. LENGTH FOR NAME" IS THE MAXIMUM NUMBER OF CHARACTERS A FORMAT REPORT NAME OR A FIELD NAME CAN HAVE. FOR SORTING, IDM SUPPORTS MULTIPLE KEYS. THAT MEANS YOU CAN SORT MORE THAN ONE FIELD AT THE SAME TIME. FOR EXAMPLE, YOU MAY WANT TO SORT THE STATE FIELD FIRST AND THEN THE CITY FIELD. UP TO FOUR SORT-KEYS AND FILTER CRITERIA ARE SUPPORTED IN REPORT FORMAT WRITER.

SO FAR NONE OF THE FILE PARAMETER INFORMATION HAS BEEN SAVED TO DISK. ENTER '1' IF IT IS ALL GOOD, OTHERWISE HIT THE BREAK KEY AND RUN THE PROGRAM AGAIN. THE RECORD NUMBER BEING INITIALIZED WILL BE DISPLAYED ON THE SCREEN. THE STRING FIELDS ARE INITIALIZED WITH SPACES AND THE NUMERIC FIELDS WITH VALUE ZERO. IT IS A TIME-CONSUMING PROCESS. IF THE FILE SIZE IS GREATER THAN WHAT THE DISK STORAGE HAS AVAILABLE, THE SYSTEM WILL HANG. IN THIS CASE, YOU HAVE TO RUN INITIALIZATION AGAIN WITH A REDUCED MAXIMUM RECORD NUMBER. ONE WAY TO FIND OUT THE NUMBER OF FREE SECTORS (AVAILABLE SPACE) ON DISK IS BY THE DOS'S 'FREE' COMMAND. ONE GRANULE IS EQUIVALENT TO 5 SECTORS. IF YOU HAVE MORE THAN 1 DRIVE, USE THE SECOND DRIVE FOR THE DATA FILE. YOU CAN USE A FORMATTED DISKETTE WITHOUT ANY SYSTEM SOFTWARE. A MESSAGE WILL BE DISPLAYED TO INDICATE THE INITIALIZATION IS SUCCESSFUL.

FOR EXAMPLE, THE DOS'S 'FREE' COMMAND SHOWS US WE HAVE 60 GRANULES OR 300 SECTORS. IF YOUR RECORD SIZE IS 40 BYTES LONG, YOU CAN PACK 6 RECORDS INTO ONE SECTOR. IDM USES THE

FIRST FIFTEEN SECTORS TO STORE SYSTEM INFORMATION, SUCH AS FILE PARAMETERS, FILE NAMES, FORMAT RECORD NAMES AND THE FORMAT RECORDS. YOUR MAXIMUM NUMBER OF RECORDS SHOULD BE $(300-15)*6 = 855$. FOR KEY ACCESS, THIS NUMBER IS SMALLER AND SHOULD BE A PRIME NUMBER (851).

(2) STARTUP THE SYSTEM.

THE IDM-IV USER HAS TO LOAD THE 'IDM' PROGRAM AND DOES NOT HAVE TO SPECIFY INITIALIZATION OR STARTUP.

RUN THE PROGRAM AND ENTER '2' TO START UP THE SYSTEM WITHOUT INITIALIZATION FOR IDM-III. ENTER THE FILE NAME FOR THIS APPLICATION. THE NAME IS THE SAME NAME YOU USE FOR INITIALIZATION. WE USE "MAIL/DAT" FOR MAILING LIST, "INV/DAT" FOR INVENTORY FILE, ETC. IT WILL READ THE DISK FOUR TIMES TO RETRIEVE THE FILE PARAMETER INFORMATION, SUCH AS RECORD SIZE, FILE NAMES AND FORMAT RECORD NAMES. DUE TO THE INEFFICIENT STRING HANDLING IN BASIC, IT TAKES SOME TIME TO TRUNCATE THE TRAILING SPACES IN NAME STRINGS.

AN AUDIT LOG IS USED TO KEEP TRACK OF THE DATA BASE UPDATES. IDM-III WILL PRINT THE UPDATE INFORMATIONS, SUCH AS 'ADD', 'UPDATE' AND THE 'DELETE' RECORD. IF YOU DO NOT HAVE A PRINTER, DO NOT USE IT. FUTURE VERSION MAY LET YOU PUT THE AUDIT LOG ON DISK OR CASSETTE. A MENU OF COMMANDS WILL BE DISPLAYED. SUB-COMMANDS ARE USED FOR 'SYSTEM' AND 'INQUIRY' FOR BETTER SCREEN FORMAT. IF YOU HIT ENTER WITHOUT A COMMAND NUMBER, MOST LIKELY THE DEFAULT COMMAND IS THE LAST ONE ENTERED.

(3) ADD

'ADD' COMMAND IS USED TO ADD A RECORD TO THE DATA BASE. DEPENDING ON THE ACCESS METHOD, A RECORD NUMBER OR A RECORD KEY IS REQUESTED FOR INPUT. FOR ACCESS BY RECORD NUMBER, YOU CAN JUST HIT ENTER TO GET THE NEXT SEQUENTIAL NEW RECORD NUMBER. YOU CAN ENTER '-1' TO RETURN BACK TO COMMAND MODE. FOR KEY ACCESS, YOU CAN ENTER THE NAME OF THE KEY OR JUST HIT ENTER KEY IF YOU WANT TO RETURN TO COMMAND MODE. IF THE RECORD ALREADY EXISTS, THE OLD RECORD WILL BE DISPLAYED. FOR NUMERIC FIELDS, YOU CAN ENTER NUMBERS SUCH AS '100' OR '100.12'. AFTER ALL THE FIELDS ARE ENTERED, YOU CAN HIT ENTER TO CONTINUE ADDING THE NEXT RECORD. IF YOU WANT TO MODIFY THE ENTERED RECORD, USE MODIFY SUB-COMMAND.

IF THE ENTERED STRING FIELD IS LONGER THAN DEFINED, YOU CAN RETYPE THE FIELD OR JUST HIT ENTER TO TRUNCATE THE EXCESS CHARACTERS. 'REDO' MESSAGE WILL BE GIVEN FOR ENTERING ALPHA CHARACTERS FOR NUMERIC FIELD. A BUFFERING TECHNIQUE IS USED TO ELIMINATE UNNECESSARY DISK I/O. IF YOU DO NOT SEE ANY DISK I/O ACTIVITY AFTER A RECORD HAS BEEN ADDED, DO NOT WORRY.

(4) INQUIRY.

IF YOU WANT TO RETURN TO MENU MODE, ENTER '-1' FOR RECORD NUMBER OR JUST HIT ENTER FOR RECORD KEY. A RECORD WILL BE DISPLAYED AND A LIST OF SUB-COMMANDS IS DISPLAYED. YOU CAN HIT ENTER KEY TO DISPLAY THE NEXT RECORD OR ENTER A RECORD NUMBER FOR ACCESS BY RECORD NUMBER. YOU CAN SELECT SUB-COMMANDS TO PRINT, UPDATE, DELETE A RECORD. FOR UPDATING A RECORD, HIT ENTER IF YOU DO NOT WANT TO CHANGE THE FIELD. THE LAYOUT OF THE SUB-COMMANDS IS PACKED IN TWO LINES, AS WE WOULD LIKE THE WHOLE RECORD TO BE DISPLAYED. NEGATIVE NUMBERS ARE USED FOR SUB-COMMANDS AND POSITIVE NUMBERS FOR RECORD NUMBERS.

THE IDM-IV USER HAS TO THE END THE SESSION AND LOAD THE 'REPORT' PROGRAM. YOU CAN HAVE THE OPTION TO SPECIFY THE RECORD RANGE AND PRODUCE LABELS. YOU CAN EITHER PRODUCE A STANDARD REPORT OR SPECIFY ONE OF THE FORMAT REPORTS. A STANDARD REPORT WILL DUMP THE WHOLE DATA FILE IN A FORMATTED FORM. THE FIRST LINE WILL CONSIST OF A RECORD NUMBER AND THE FIRST FIELD. IT MAY TAKE SEVERAL PRINT LINES FOR A RECORD. FOR KEY ACCESS, THE RECORD NUMBER IS NOT THE SEQUENCE NUMBER ENTERED. IT IS THE LOGICAL RECORD IN THE FILE. SINCE RECORDS ARE SCATTERED ANY PLACE IN THE FILE FOR KEY ACCESS, THE SYSTEM WILL SCAN THE WHOLE FILE EVEN IF YOU ONLY HAVE ONE RECORD.

HIT ENTER KEY FOR SPECIFYING FORMAT REPORT. THE SYSTEM WILL DISPLAY THE FORMAT RECORD NUMBERS AND THE ASSOCIATED REPORT NAMES. IF THE FORMAT RECORD IS UNUSED, THE NAME FIELD WILL BE BLANK. ENTER THE FORMAT RECORD NUMBER OR HIT ENTER KEY FOR THE FORMAT RECORD THAT IS LAST REFERENCED OR CREATED. IF THE REPORT REQUIRES SORTING, IT WILL TAKE AT LEAST TWICE AS MUCH TIME. THE WHOLE FILE IS READ TO EXTRACT THE SORT-KEYS. SORTING REQUIRES MANY PASSES THROUGH THE SORT-KEYS. THE PASS NUMBER WILL BE DISPLAYED ON THE SCREEN. IT IS NOT RECOMMENDED TO OUTPUT TO SCREEN. HIT ENTER TO RESPOND TO ANY QUESTION MARK FOR SCREEN OUTPUT. THE PRINT LINE SHOULD BE LESS THAN 256 BYTES LONG (A LIMIT IN BASIC).

IDM-IV PROVIDES LABEL GENERATION FACILITY. THE LABEL HAS FIXED FORMAT. LINE #3 OF THE LABEL IS FIELD #1, LINE #4 IS FIELD #2 AND LINE #5 IS FIELD #3. LINE #1, 2 AND 6 ARE BLANK LINES.

(6.) SYSTEM

'SYSTEM SUMMARY' IS THE SAME DISPLAY AS IN INITIALIZATION.

'CREATE FORMAT' COMMAND IS THE REPORT WRITER. YOU CAN USE IT TO SPECIFY A REPORT FORMAT ON-LINE. FIRST, YOU CAN ENTER THE NAME OF A REPORT (20 CHARACTERS MAXIMUM). THE FIELD INFORMATION WILL THEN BE DISPLAYED. YOU CAN SELECT THE FIELDS IN THE PRINT LINE. YOU CAN HIT ENTER TO TERMINATE FIELD SELECTION. IF YOU WANT TO TOTAL OR TO AVERAGE ALL THE NUMERIC FIELDS, ENTER '1' AND THEY WILL BE PRINTED AT THE END OF THE REPORT. FIELD ARITHMETIC FOR NUMERIC FIELDS INCLUDES MULTIPLICATION AND DIVISION. IT WILL BE APPENDED TO THE END OF THE PRINT LINE. EXAMPLE OF USAGES IS PROFIT/EARNING.

FILTER LETS YOU PRINT THOSE RECORDS SATISFYING A SPECIFIED CRITERIA, SUCH AS ALL THE BOYS BETWEEN AGE 10 AND 15. UP TO 4 SUCH CRITERIA CAN BE SPECIFIED. THE FIELD HAS TO BE NUMERIC. THE SELECTED NUMERIC FIELD MUST BE WITHIN A SPECIFIED INCLUSIVE RANGE. FOR EXAMPLE, YOU CAN ENTER THE SAME VALUE 10 FOR LOW AND HIGH VALUES TO SELECT ALL STUDENTS AGED 10. SORT-KEYS CAN BE UP TO 4 STRING FIELDS. IF YOU ONLY USE THIS FORMAT RECORD ONLY ONCE, YOU MAY NOT WANT TO SAVE IT ON DISK. THE 10 FORMAT RECORDS WILL BE DISPLAYED FOR YOU TO CHOOSE ANY UNUSED ONE. IF YOU WANT TO REUSE A FORMAT RECORD, ENTER THAT FORMAT RECORD NUMBER. ONCE THE FORMAT RECORD IS SAVED ON DISK, IT CAN BE RETRIEVED WITH THE REPORT GENERATOR.

(7) END.

THIS SHOULD BE THE LAST COMMAND TO END THE SESSION. IT WILL WRITE THE UPDATED FILE PARAMETERS BACK TO DISK AND FLUSH THE WRITE BUFFER.

REPORT WRITER (CREATE FORMAT COMMAND)

'REPORT WRITER' IS ONE OF THE SUB-COMMANDS OF THE 'SYSTEM' COMMAND. YOU CAN USE IT TO SPECIFY A REPORT FORMAT ON-LINE. FIRST, YOU CAN ENTER THE NAME OF A REPORT (20 CHARACTERS MAXIMUM). THE FIELD INFORMATION WILL THEN BE DISPLAYED. YOU CAN SELECT THE FIELDS IN THE ORDER IN THE PRINT LINE. YOU CAN HIT ENTER TO TERMINATE FIELD SELECTION. FOR LABEL PRINTING, FIELD SELECTION WILL BE IGNORED.

FILTER LETS YOU PRINT THOSE RECORDS SATISFYING A SPECIFIED CRITERIA, SUCH AS ALL THE RECORDS WITHIN THE SELECTION CODE 50 AND 100. UP TO FOUR SUCH CRITERIA CAN BE SPECIFIED. THE FIELD CAN ONLY BE NUMERIC. SORT-KEYS CAN BE UP TO FOUR STRING FIELDS. THE TEN FORMAT RECORDS WILL BE DISPLAYED FOR YOU TO CHOOSE ANY UNUSED ONE. IF YOU WANT TO REUSE A FORMAT RECORD, ENTER THAT FORMAT RECORD NUMBER. ONCE THE FORMAT RECORD IS SAVED ON DISK, IT CAN BE RETRIEVED IN REPORT GENERATOR.

FOR IDM-IV, YOU CAN SELECT LABEL OR REPORT. FOR LABEL GENERATION, THE FORMAT OF A LABEL HAS BEEN FIXED WITH THE FIRST FIELD (NAME) ON THE THIRD LINE, SECOND FIELD (STREET) ON THE FOURTH LINE, AND THE THIRD FIELD (CITY/STATE/ZIP) ON THE FIFTH LINE. LINE #1, 2 AND 6 ARE BLANKS. THE STANDARD LABEL SHOULD HAVE A TOTAL OF SIX LINES.

THE REPORT WRITER IS A NEW CONCEPT AND MAY BE THE FIRST ONE IMPLEMENTED FOR THE MICROCOMPUTER. THE FOLLOWING ILLUSTRATES HOW TO USE THE REPORT WRITER. WE USE THE SAME FILE PRODUCED IN 'TUTORIAL' SECTION. THE RECORD SHOULD HAVE THREE STRING FIELDS AND ONE NUMERIC SELECTION CODE FIELD. WE WOULD LIKE TO PRODUCE A REPORT WITH 2 FIELDS: NAME AND SELECTION CODE. WE ONLY INCLUDE THE RECORDS FOR PAID MEMBERS, WHICH ARE IN SELECTION CODE 0 TO 100 AND 1000 TO 2000. THE FIELD TO BE SORTED IS THE NAME FIELD. ALL THE ABOVE INFORMATION ARE THE SPECIFICATIONS OF THE REPORT AND CAN BE SAVED ON A FORMAT RECORD. RUN THE 'IDM' PROGRAM. ENTER SYSTEM COMMAND. ENTER '2' FOR REPORT WRITER. TYPE IN THE FOLLOWING ON SCREEN #5 AND #6 ENTER '1' FOR SELECTING TO SAVE THIS INFORMATION ON FORMAT RECORD #1. SAVE THE FORMAT RECORD TO THE DISK IF ALL THE DATA ARE VALID OTHERWISE TRY AGAIN. FOR IDM-IV USERS, END THIS SESSION AND RUN THE 'REPORT' PROGRAM. SELECT TO PRODUCE FORMATTED REPORT. THE IDM-IV USER HAS TO END THE SESSION AND RUN THE 'REPORT' PROGRAM. ENTER THE FORMAT RECORD NUMBER YOU SAVED TO DISK. THE PROGRESS OF THE SORTING WILL BE DISPLAYED ON THE SCREEN. THE REPORT AS SPECIFIED WILL BE PRODUCED ON THE PRINTER.

** CREATE FORMAT **

NAME OF FORMAT REC? NAME & SEL. CODE

| # | FIELD NAME | TYPE | SIZE |
|---|------------|------|------|
|---|------------|------|------|

| | | | |
|---|------|---|----|
| 1 | NAME | S | 20 |
|---|------|---|----|

| | | | |
|---|--------|---|----|
| 2 | STREET | S | 30 |
|---|--------|---|----|

| | | | |
|---|----------------|---|----|
| 3 | CITY/STATE/ZIP | S | 35 |
|---|----------------|---|----|

| | | | |
|---|----------------|---|---|
| 4 | SELECTION CODE | N | 4 |
|---|----------------|---|---|

* SELECT FIELD (TERMINATED BY 'HIT ENTER') *

ENTER FIELD #? 1

ENTER FIELD #? 4

ENTER FIELD #?

HIT ENTER FOR NO TOTAL. '1' - YES? _

SCREEN #5 REPORT WRITER 1

FIELD A*B (HIT ENTER IF NO MULTIPLY)

FIELD A?

FIELD A / B (HIT ENTER IF NO DIVIDE)

FIELD A?

* FILTER. (HIT ENTER IF NO FILTER OR TERMINATE)

FIELD #? 4

ENTER INCLUSIVE RANGE

LOW VALUE? 0

HIGH VALUE? 100

FIELD #? 4

ENTER INCLUSIVE RANGE

LOW VALUE? 1000

HIGH VALUE? 2000

FIELD #?

* SORT. (HIT ENTER IF NO SORT OR TERMINATE)

FIELD #? 1_

SCREEN # 6 REPORT WRITER 2

These supplementary notes are for WORD-IV, IDM-IV, INV-V, and ACCT-III.

PURPOSE: We have delivered this high-quality software for over a year. We have made many enhancements and fixed all the known bugs. The notes here serve the purpose of upgrading the manuals without re-doing them, and serves as answers to the most common questions from our users.

(1) A file named VERSION has been included in some of the packages. Use DIR command to check whether you have one on our program disk. It may be named VERSION1, VERSION2, and so on. It contains similar supplementary notes but with more specific information for the package. 'LIST' it out to the screen or printer. This file can be loaded under BASIC.

(2) You cannot use an unformatted disk. A formatted disk can be created by DOS's FORMAT command. When you use the BACKUP command, the disk is automatically formatted before it is copied. You can still backup with a one disk system. A system disk is one that contains the TRSDOS operating system, and can be created by backing up a TRSDOS disk to a blank disk. If you cannot backup the disk, try to use BASIC to load the files one at a time and save them to another disk, or try to use another machine (a local Radio Shack store).

The system disk containing TRSDOS must be inserted on drive #0. We made an error on some user's manuals, but it has been corrected in the VERSION file. For dual disk ACCT-III systems or single disk systems for other packages, you can have more disk storage by:

(A) Insert the program disk on drive #0, bring up BASIC, load the program, replace the program disk with a system disk, and type RUN to run the program.

(B) In order to increase more storage on the system disk, you can delete most of the system modules. Use the following DOS command: DIR:0 (I,A,S). The master password is PASSWORD. Type the following under DOS:

```
KILL BACKUP/CMD.BACKUP
KILL FORMAT/CMD.FORMAT
KILL BASIC/CMD.BASIC
```

For those who have 40 tracks, 8" disks, or hard disks, our programs do not have any restrictions on file size that I know of.

(3) Memory consideration

'OM' error means running out of memory. Have you brought up the BASIC with the specified number of files? Type the following: CLEAR 1, and run the program again. The string space occupied by the previous program is not automatically released. In most of our new versions we force the release of the string space by the END command. You should not have this problem on 48K systems.

The number of records you can sort is limited by available memory. The form processing features in INV-V, INV-IV, MAIL-V, and ACCT-III can be speeded up by enlarging the string space. If you have a 48K system, increase N and M in the statements: CLEAR N and ZT\$(M), ZT!(M), and ZT%(M). These statements can be found in the beginning of the programs. M is the number of records you can sort, and N is the size of the string space. Refer to your user's manual or file VERSION for details. Besides OM error, there may be an out of string error. This should not occur in normal operations. When you select to sort data by two keys, the number of sorted records will be half the size of 'M'. For example, if 'M' is 500, you will have an out of subscript error on 251th record when sorting two keys. I suggest an upgrade to a 48K system. For less than a hundred dollars, the increase in throughput is a bargain.

(4) REPORT WRITER

It is an advanced concept, and may be harder to understand since not too many software vendors offer a report writer. Additional description is as follows.

A report writer allows you to specify a report format on-line, such as the fields you want to be printed. Once a report format is specified, you can save this format record to the disk. Now you can load the report generator for the report writer. The report generator will ask you which format record you want to use to produce a report. A report will be produced with the specifications in the format record.

When you use the report writer, the system will ask you to enter the name of a report. This is only used for identification purpose. Then you can select the fields in the order in the print line. Use field numbers, such as 1,2,3. You can hit enter without a number to terminate field selection. Filter lets you print those records satisfying a specified criteria. For the current versions in Mod-I, it is an OR function. The print line should not be greater than 255 or the size of the printer. Report format records can be re-used.

(5) OTHERS.

The word processor includes text file named INST. Do not run INST, but you can load it under BASIC and list it out. Follow the instructions in tutorial. This file is used as an example, and is an input text file to WORD. For the tag function, right arrow can be used. You should save the files in two formats, one regular and the other in ASCII format. The sizes of the fields may be changed if desired in only one module 'INIT'. For example, you may want to increase ZIP CODE EXT. field by 1 and decrease the NAME field by 1. Change the values of Z(31,F) and Z(36,F) accordingly. It works only for new files. In case of hardware errors or power failures, try to type CLOSE to close all the files. Record by record initialization process is time-consuming but proves to be the best prevention for hardware error.

PITFALLS

(1) SYSTEM HANGS. PRINTER IS NOT ON. (2) OUT OF STRING OR MEMORY SPACE. SORTING TOO MANY RECORDS. REFER TO PROGRAM TUNING SECTION. (3) LOSE NEW FORMAT RECORDS, RECORD NUMBER IS OFF OR LOST LAST UPDATES. FORGET TO USE 'END' COMMAND OR SYSTEM CRASHES. FOR ACCESS BY RECORD NUMBER, USE 'ADD' COMMAND TO SEARCH FOR THE NEXT AVAILABLE RECORD NUMBER, AND ADD ONE NEW RECORD TO ENABLE THE SYSTEM TO UPDATE THIS NEW RECORD NUMBER.

EVERYTHING WRONG! YOU HAVE NOT SPECIFY '1' AS THE NUMBER OF FILES WHEN BRINGING UP BASIC. THIS IS IMPORTANT BECAUSE THE PROGRAM MAKES USE OF EVERY SINGLE BYTE AVAILABLE IN A 32K SYSTEM, AND BASIC DOES NOT GIVE GOOD ERROR MESSAGES.

FOR SOME UNKNOWN REASON, IT HAPPENED TO US ONCE THAT I HAD TO GO BACK TO DOS AND LOAD THE PROGRAM AGAIN. I STILL CANNOT USE THE FORMATTED DISK FOR DATA ON DRIVE#0.

LIMITS

AS IN REALITY, IDM HAS ITS LIMITS. IT MAY BE DUE TO THE HARDWARE, MEMORY, SOFTWARE AND IDM ITSELF. IDM IS NOT A COMPLETE DATA BASE MANAGER.

THE NUMBER OF RECORDS IS LIMITED BY THE SIZE OF A DISKETTE. THE MAXIMUM NUMBER OF FIELDS IS SET TO BE 20 (WE CAN SET IT TO BE ANY NUMBER). THE MAXIMUM NUMBER OF STRING FIELDS IS TEN AND NUMERIC FIELD IS TEN. YOU CANNOT HAVE 15 STRING FIELDS AND 5 NUMERIC FIELDS. IT CANNOT SORT NUMERIC FIELD. THERE CAN BE UP TO FOUR SORT KEYS AND RECORD SELECTION CRITERIA. THE NAME OF A FORMAT RECORD OR A FIELD CAN BE UP TO 20 CHARACTERS LONG. THE FIRST FIELD OF A RECORD MUST BE STRING. ONLY ONE FILE CAN BE OPENED AT ONE TIME.

PROGRAM TUNING

IDM-III:

THE NUMBER OF RECORDS TO BE SORTED IS LIMITED BY THE MEMORY SIZE.

THE PROGRAM CAN BE CHANGED IN ORDER TO SORT MORE RECORDS AS IN (1) AND (2).

(1) 48K SYSTEM. TYPE THE FOLLOWING.

.50 CLEAR 10000

.128 DIM ZT\$(1000),ZT%(1000)

(2) 32K SYSTEM. WE CAN MAKE IDM-III INTO TWO PROGRAMS INSTEAD OF ONE. TYPE THE FOLLOWING TO MAKE 'REPORT GENERATOR' A SEPARATE PROGRAM:

.50 CLEAR 7000

.128 DIM ZT\$(500),ZT%(500)

.DELETE 10005-11200

.DELETE 11530-15290

.DELETE 22000-25000

.11505

.19380 GOTO 18000

.SAVE"REPORT"

NOW WE HAVE SAVED A PROGRAM NAMED 'REPORT' TO DISK. IT CAN BE USED TO PRODUCE REPORTS SORTING UP TO 500 RECORDS.

THIS IS ALMOST REQUIRED IF YOU DO SORTING. 32K SYSTEMS ARE LIMITED IN MEMORY IN SORTING. WE INCREASE THE SORT BUFFER SIZES BY TAKING OUT MOST OF THE

CODES BESIDE THE 'REPORT' CODES. NOW WE HAVE TWO PROGRAMS, ONE WITH FULL FUNCTIONS AND THE OTHER FOR PRODUCING SORTED REPORTS. THE FIRST PROGRAM CAN BE USED FOR EVERY FUNCTIONS EXCEPT FOR REPORTS THAT REQUIRE SORTING.

(3) BUG!!! WE ARE NOT SURE IT IS A BUG OR NOT. WE DO NOT HAVE PROBLEM IN SORTING. FIX IT BY TYPING.

. 128 DIM ZT\$(50), ZT%(50)

(4) SKIP INITIALIZATION REQUEST ON STARTUP.

. 10005 ZA=2

IDM-IV

(1) FOR 48 K SYSTEM, CHANGE 'REPORT' PROGRAM.

. 50 CLEAR 17000

. 128 DIM ZT\$(1000), ZT%(1000)

THIS WILL INCREASE THE SORT BUFFERS.

. CHANGE LABEL FORMAT. LINE 17000-18000 IN 'REPORT' PROGRAM.

SUMMARY

IDM-III IS A SOFTWARE PACKAGE FULL OF FEATURES FOR MICRO DATA BASE MANAGEMENT. DUE TO ITS LOW PRICE, WE DEPEND ON YOUR MOUTH-TO-MOUTH ADVERTISEMENT. COPYRIGHTS WILL BE STRICTLY ENFORCED BY OUR LAWYERS, SO DO NOT GIVE A COPY TO YOUR FRIEND. WE OFFER FREE PERIODIC UPDATES. PLEASE WRITE TO US IF YOU FIND A BUG OR YOU WANT TO INCLUDE SOME FEATURES. IT IS A NEW PACKAGE AND ITS SUCCESS DEPENDS ON YOUR FEEDBACK. WE WROTE THIS PACKAGE BUT WE DO NOT USE IT EVERY DAY AS YOU DO.

THIS PACKAGE HAS NO INTENTION OF REPLACING SOME COMMON APPLICATION PACKAGES, SUCH AS OUR 'MAIL' OR 'INV'. IF YOU HAVE USED IDM-III FOR AN APPLICATION AND YOU WANT IT TO BE SHARED BY OTHER IDM-III USERS, PLEASE SEND IT TO US ON A DISKETTE. WE SHALL DISTRIBUTE IT TO OTHER IDM-III USERS AT REASONABLE COSTS.

!! THIS DOCUMENTATION IS PREPARED BY OUR WORD PROCESSOR. SORRY ABOUT NO LOWER CASE AND THE PRINT QUALITY OF THE CENTRONIC 779 PRINTER. WE ARE WORKING ON INTERFACING A DIABLO HYPE II PRINTER TO THE CENTRONIC PORT AND OUR WORD PROCESSOR HAS BEEN MODIFIED TO TAKE UPPER/LOWER CASE WITHOUT KEYBOARD MODIFICATION. !!